Shaw

3,884,228

3,901,231

5/1975

8/1975

[45] Dec. 28, 1976

[54]	ANTI-CLOGGING LIQUID ADMINISTRATION APPARATUS AND METHOD	
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[22]	Filed:	Apr. 10, 1975
[21]	Appl. No.: 566,933	
[52]	U.S. Cl	128/214 R; 128/214 C; 128/214 E; 128/DIG. 12
[51]	Int. Cl. ²	
	Field of Search 128/214 R, 214 A, 214 C,	
128/214 E, 214 F, 214.2, DIG. 6, DIG. 12,		
	·	DIG. 13
[56]		References Cited
UNITED STATES PATENTS		
3,242,	924 3/19	66 Kraft et al 128/214 E

Hahn 128/DIG. 12

Olson 128/214 F

Primary Examiner—Louis G. Mancene Assistant Examiner—Robert F. Cutting Attorney, Agent, or Firm—A. C. Smith

[57] ABSTRACT

An improved method and means for preventing the intravascular needle of liquid infusion apparatus from clogging uses a delivery control means which operates in two modes at two liquid delivery rates. In the first operating mode, the delivery control means may be set to deliver liquid to a patient at a selected rate. In the second operating mode, the delivery control means supplies liquid at a slower rate which is sufficient to flush the needle. The transition from operation in the first mode to operation in the second mode is initiated in various ways in response to the volume of liquid delivered to a patient.

14 Claims, 3 Drawing Figures

